

ABSTRACT OF THE DISCLOSURE

A microscope is disclosed in which a specimen is arranged between two objectives and can be observed with reflected light as well as with transmitted light. In a microscope with field transmission, two objectives have substantially identical optical characteristics and at least one of the two objectives is followed by a mirror which reflects the light transmitted through the specimen back into itself exactly. In this way, there is twofold transmission through the specimen with optimum illumination of the solid angle. In a laser scanning microscope, there are likewise two objectives with identical optical characteristics and at least one of the objectives is followed by a phase-conjugating or adaptive mirror.